

DTS Transformation Programme Update 2

ElectraLink Ltd



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1 EXECUTIVE SUMMARY

This document is the second of four updates to the Data Transfer Service (DTS) community and other relevant stakeholders outlining progress with the DTS Transformation Programme. The first update, which was issued on 17th March 2014, described the background to the programme and provided information that enabled you to understand the changes and what the changes will mean to you.

This second update summarises the successes achieved so far and provides further information on the new DTS Gateway options which will become available from October 2014. Please read this document and consider which of the Gateway options you would like to use going forward. The existing Gateways will be gradually decommissioned from Q4 this year and you have a choice of replacing the existing Gateway with one of a number of options. Some of these options are new and are being introduced by ElectraLink to help you reduce your costs of using the DTS.

You will receive two further updates from ElectraLink as the DTS Transformation Programme progresses towards completion at the end of 2014.

If you would like to discuss this document or any of the Gateway options described below, please contact the ElectraLink helpdesk using one of the following:

- Email – helpdesk@electralink.co.uk; or
- Telephone – 020 7432 3012.

2 WHAT HAS BEEN ACHIEVED SO FAR?

2.1 APPLICATION MIGRATION COMPLETED

The DTS application was successfully migrated from ICAN to JBOSS Fuse on 17 May 2014.

The DTS uses a core messaging application to ensure efficient, robust and reliable data transfer within the service. The old application, ICAN, was approaching its end of life and will not be supported by Oracle beyond Q2 2014.

An alternative product was chosen to replace ICAN. This product is JBoss Fuse, from Red Hat. In the first update, we provided this [link](#) for those of you who would like to read a little bit more about this application.



I am pleased to confirm that this migration was achieved on 17 May 2014 when the new JBOSS Fuse application was switched on. A small number of operational issues were experienced by some of you during the first few days of its use, for which we apologise. However, the service has been running reliably for the last 3 weeks and we are confident that this messaging application will continue to provide robust support for the DTS Service.

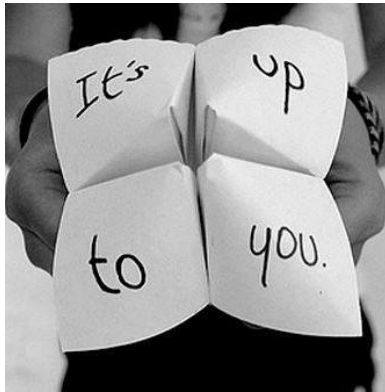
2.2 NETWORK UPGRADE UNDER WAY

For those of you who have a DTS Gateway installed at your site, we are already part way through upgrading your backup communications link. The existing backup link is currently ISDN. This is old technology and is no longer provided by a number of telecommunications service providers. It is being replaced by DSL¹, which can be thought of as 'business broadband'. DSL is also an 'always-on' technology so when it is needed, there is no delay which would otherwise be experienced on ISDN as the target number is dialled.

All DTS Users with a DTS Gateway have already been contacted to arrange this migration which is now under way.

¹ Digital Subscriber Line or Digital Subscriber Loop, which transmits digital signals through an analogue telephone line.

3 DTS GATEWAY OPTIONS



As well as changes being made within the core of the DTS, we are also introducing new options for connecting to the service.

This section of the document repeats some of the information we provided in the first update, however it has been updated with more information, including pricing for each option. Pricing for each of the options is shown below and summarised in Section 4 for ease of reference.

We would encourage those of you who have an existing Gateway installed at your data centre, or who are considering such an option, to read this section and begin to think about what the right choice is for your organisation going forward.

The Gateway options which will be available for use from October 2014 are as follows.

3.1 HIGH VOLUME GATEWAY (HVG)

A HVG is located within your data centre or, if you have outsourced your data centre provision to a third party, within their data centre. The HVG is typically co-located with the systems that you use to operate in the energy market.

The HVG consists of a server, a communications router, two network links (2mbps MPLS and dual channel ISDN) and other, supporting equipment such as an optional uninterruptible power supply, network hub etc. These items are typically installed in a 19 inch rack which we provide as part of the service, although a small number of HVG's are installed within our customers' own cabinets.

Data is transferred to and from the HVG using FTP and can use all combinations of PUSH and PULL options.

For those of you who want to maintain this option instead of migrating to one of the new Virtual Gateway options described in sections 3.4-3.6 below, we will arrange a replacement server to be installed as the existing server will also be obsolete within the next 9 months. It is expected that the Gateway server replacement program will start in October 2014 and will complete early in 2015.

ElectraLink is happy to confirm that the annual rental for the HVG will remain unchanged at £26,000 per annum.

3.2 LOW VOLUME GATEWAY (LVG)

A LVG is located within your data centre or, if you have outsourced your data centre provision to a third party, within their data centre. The LVG is typically co-located with the systems that you use to operate in the energy market.

The LVG consists of a server, a communications router, two network links (1 mbps MPLS and dual channel ISDN) and other, supporting equipment such as an optional uninterruptible power supply, network hub etc. These items are typically installed in a 19 inch rack which we provide as part of the service, although a small number of LVG's are installed within our customers' own cabinets.

Data is transferred to and from the LVG using FTP and can use all combinations of PUSH and PULL options.

For those of you who want to maintain this option instead of migrating to one of the new Virtual Gateway options described in sections 3.4-3.6 below, we will arrange a replacement server to be installed as this will also be obsolete within the next 9 months. It is expected that the Gateway server replacement program will start in October 2014 and will complete early in 2015.

ElectraLink is happy to confirm that the annual rental for this option will remain unchanged at £14,800 per annum.

3.3 REMOTE USER GATEWAY (RUG)

The RUG is a Gateway which is located within ElectraLink's data centres and which is shared by a number of our customers. The physical hardware is similar to an HVG.

Connection to the RUG is achieved through the public Internet and ElectraLink provides software to negotiate a secure, encrypted tunnel from your site through to the data centre which houses the RUG. A small number of RUG customers have a 'site to site' connection which achieves the same, secure tunnel, but uses hardware at the customer site rather than software.

For those of you who are RUG users and who drag and drop your data to and from the RUG using a mapped network drive, this option will be replaced in Q1 2015 with a similar FTP interface. We have already contacted those RUG Users who use this feature to start the process of migrating to the new solution. This change is being made to increase security of the RUG option.

ElectraLink is happy to confirm that the annual rental for this option will remain unchanged at £480 per annum.

3.4 VIRTUAL HIGH VOLUME GATEWAY (VHVG)

This option to connect to the DTS will be available for all DTS Users from October 2014.

This option will utilise two network connections in the same configuration as the existing HVG, i.e. a primary 2mbps MPLS connection with a backup² connection in case the MPLS fails.

Users of this option will connect to a shared, virtual Gateway server at the central hub, which will be partitioned between all virtual users. The FTP PUSH and PULL interfaces and all existing hosts will be migrated to the new service as part of the transformation from your existing Gateway option to the new virtual option.

In this VHVG option, data will no longer be digitally signed by the sending Gateway, as there will not be a server on your site to sign the data. In this instance **data will not be encrypted** however, the data will be transmitted across a virtual private network.

The annual rental for this VHVG option will be £20,500 reflecting a 21% reduction on the alternative HVG option.

As this option will not require the rack space and data centre resources etc. currently utilised by the HVG, further savings could be secured directly by users.

² The backup connection is being changed from ISDN to a modern, DSL option. This network upgrade has already commenced and Gateway customers have already been contacted about the change from ISDN to DSL.

3.5 VIRTUAL LOW VOLUME GATEWAY (VLVG)

This option to connect to the DTS will be available for all DTS Users from October 2014.

This option will utilise two network connections in the same configuration as the existing LVG, i.e. a primary 1mbps MPLS connection with a backup2 connection in case the MPLS fails.

Users of this option will connect to a shared, virtual Gateway server at the central hub, which will be partitioned between all virtual users. The FTP PUSH and PULL interfaces and all existing hosts will be migrated to the new service as part of the transformation from your existing Gateway option to the new virtual option.

In this option, data will no longer be digitally signed by the sending Gateway, as there will not be a server on your site to sign the data. In this instance **data will not be encrypted** however, the data will be transmitted across a virtual private network.

The annual rental for this option will be £9,500 reflecting a 36% reduction on the alternative LVG option.

As this option will not require the rack space and data centre resources etc. currently utilised by the LVG, further savings could be secured directly by users

3.6 REMOTE VIRTUAL GATEWAY OPTIONS (RVHVG AND RVLVG)

These options to connect to the DTS will be available for all DTS Users from October 2014.

For those HVG and LVG Users who wish to operate their DTS connection across the public internet, instead of through a dedicated MPLS and backup circuit, ElectraLink is introducing new Remote Virtual Gateway options. The Remote Virtual Gateway options for HVG and LVG will operate in a similar way to the existing Remote User Gateway however, they will include dedicated Internet bandwidth at the central data centres for each user, rather than the existing RUG which shares a single 4 mbps link for all RUG users.

The RVHVG and RVLVG users will provide their own Internet connection at their site and ElectraLink will provide dedicated Internet bandwidth at its primary and secondary data centres. Internet bandwidth can be provided in 1mbps increments. The Internet connection will be encrypted via the VPN tunnel.

The annual rental for the RVHVG option (with 2mbps Internet connection) will be £11,000 reflecting a 58% reduction on the alternative HVG option.

The annual rental for the RVLVG option (with 1mbps Internet connection) will be £5,100 reflecting a 66% reduction on the alternative LVG option.

As these options will not require the rack space and data centre resources etc. currently utilised by the HVG and LVG, further savings could be secured directly by users

4 GATEWAY PRICING

The following table provides a summary of the pricing for each of the options to connect to the DTS described in Section 3. ElectraLink has succeeded in maintaining the costs of the current options for connecting to the DTS. In addition the DTS Transformation Programme is allowing ElectraLink to offer Users virtual Gateway alternatives to connect to the DTS at a significantly reduced cost.

ElectraLink has continued to maintain a low cost entry option in the Remote User Service. As currently, the DTS charging principles mean that ElectraLink will fund the upfront development and installation costs for all Gateways and recover these through the rental charges.

Gateway Type / Annual Rental	£
High Volume Gateway (HVG)	26,000
Low Volume Gateway (LVG)	14,800
Remote User Gateway (RUG)	480
Virtual High Volume Gateway (VHVG)	20,500
Virtual Low Volume Gateway (VLVG)	9,500
Remote Virtual High Volume Gateway (RVHVG)	11,000
Remote Virtual Low Volume Gateway (RVLVG)	5,100

5 NEXT STEPS

The DTS Transformation Programme commenced in October 2013 and is now well under way. The detailed planning and high level designs are complete, as is the migration to the new messaging application, JBoss Fuse. Good progress has been made replacing the old ISDN backup communications links with DSL the new virtual cloud environment is being configured ready for the next big switch-over in September 2014.

Please review the Gateway options described in Section 3. Once you have decided which Gateway option is right for you, please contact ElectraLink and let us know what you have decided so that we can start to plan your Gateway upgrade. We will be reminding you individually over the coming weeks.

This rest of this section provides an update on the remainder of the Transformation Program.

5.1 PLANNED TIMESCALES

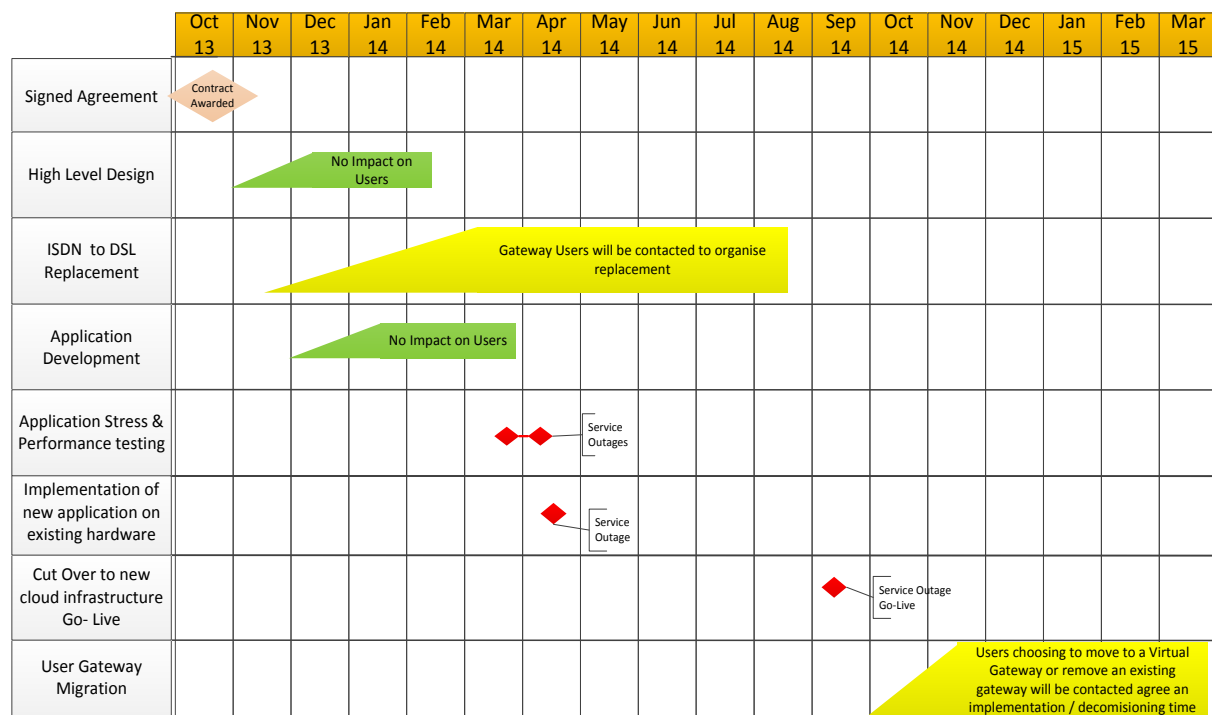


Figure 1: High Level Timescales

Figure 1 provides a high level time line, concentrating primarily on those aspects of the project that will impact you. This has not changed since update 1.

High Level Design – This is complete and has no direct impact on users of the service.

ISDN – DSL replacement – This is currently being undertaken to migrate those parties with ISDN backup connections to their Gateways to newer, more reliable and ‘always-on’ DSL network backup connections. If this affects you, we have already contacted you to arrange the migration.

Application Development – This work is now complete.

Performance Testing – These tests were completed successfully.

Implementation on existing infrastructure – This was completed successfully on 17 May 2014.

Cutover to Cloud infrastructure - An outage in September will be confirmed to allow for the migration of the live service from the existing hardware infrastructure to the new cloud infrastructure. This milestone is also the Go-Live of the new service.

User Gateway Migration – Once you have chosen your replacement Gateway option, we will plan and carry out the changes, agreeing a suitable changeover / implementation date with you.

In the meantime, if you would like any further information, please contact the ElectraLink [helpdesk](#).

6 GATEWAY OPTIONS SUMMARY DIAGRAMS

Figure 2 details the Gateway options presented in section 3, it also provides details of the service boundaries for each option and network communication capacities where applicable. Note that ElectraLink will not be able to provide service levels regarding availability of the Internet connection to the user as this will not be provided within the scope of the service.

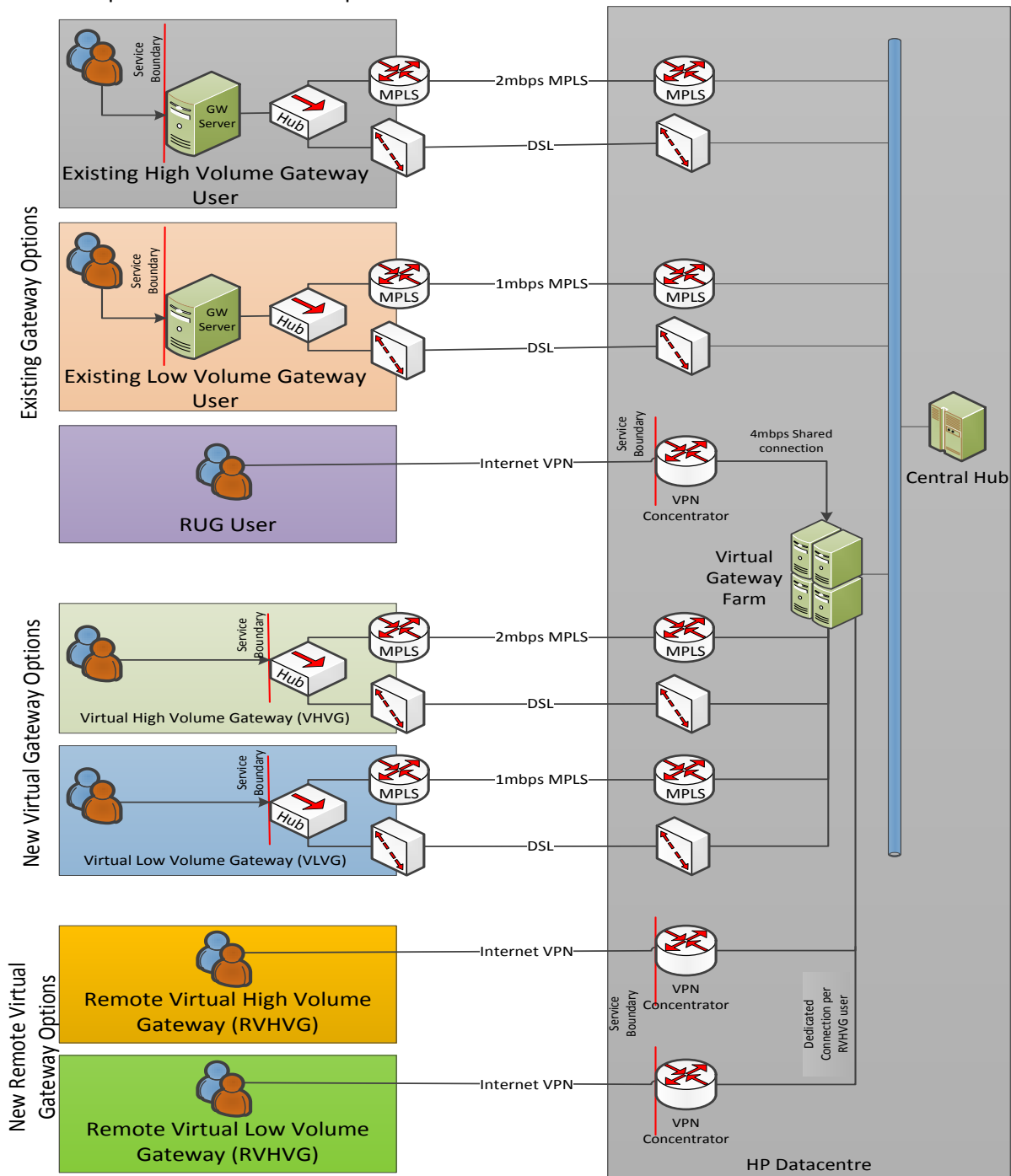


Fig 2 - DTS Connectivity Options